

USSR

UDC: 621.319.4(088.8)

PSHENICHNYY, I. S., BUDKIN, I. A., ALEKSEYEV, V. L., STAZHKOV, V. N.,
KORNEYEV, A. D., USPENSKIY, D. N.

"A Device for Testing Capacitors With Respect to Electric Parameters"

USSR Author's Certificate No 283416, filed 17 Apr 69, published 10 Dec 70
(from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6V384 P)

Translation: This Author's Certificate introduces a device for testing capacitors with respect to electric parameters. The device consists of a vibration hopper with power supply, a transport mechanism, contact groups, and memory and sorting elements. As a distinguishing feature of the patent, automatic operation of the device is provided by making the memory element in the form of a light display panel with signal lamps in a number corresponding to the number of capacitors to be tested, and the analyzing element is a pointer with a photocell located above the lamps and kinematically coupled to the transport disc and providing electrical control of the sorting unit.

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USSR

UDC: 621.319.4(088.8)

BUDKIN, I. A., ALEKSEYEV, V. L., STAZHKOV, V. N., KORNEYEV, A. D.,
USPENSKIY, D. N., KOSHURO, V. A., BUDIN, V. I.

"A Case for Flat Capacitors"

USSR Author's Certificate No 283414, filed 12 May 69, published 10 Dec 70
(from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6V387 P)

Translation: This Author's Certificate introduces a casing for flat capacitors of fixed value. The cartridge is made in the form of a ruler with reinforcing ribs fitted with locators for the capacitor leads. As a distinguishing feature of the patent, in order to improve the reliability of locating the leads, the casing is equipped with H-shaped transverse guide bridges and longitudinally oriented lobes.

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USSR

UDC 621.319.4.002.5

PSHENICHNYY, I. S., NIKITIN, V. A., YAKUSHEV, S. G., BUDKIN, I. A.,
ALEKSEYEV, V. L., ARBUZOV, A. D.

"A Device for Applying Silver Paste to Ceramic Disc Capacitor Blanks"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki,
1970, No 33, Soviet Patent No 285112, class 21, filed 8 May 69, published
29 Oct 70, p 58

Translation: This Author's Certificate introduces a device for applying silver paste to ceramic disc capacitor blanks. The unit contains a rotating disc for transporting the blanks. Around the periphery of the disc are multiple-place cartridges with pockets for the blanks. The device also contains a mechanism for applying the paste to the blanks which is fitted with punches. Also included in the device are a drying chamber and a drive mechanism. As a distinguishing feature of the patent, the precision and productivity of the device are improved by placing hollow split sleeves with spring-loaded lugs in the cartridge pockets. Rods fit into these hollow sleeves and open them, and the punches are located on both sides of the cartridges.

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USSR

BUD'KO, N. I., KARPMAN, V. I., and SHKLYAR, D. R.

"Stability of a Plasma in the Field of a Longitudinal Monochromatic Wave"

Moscow, Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 61, No 4(10),
October 1971, pp 1463-1476

Abstract: The evolution of disturbances in a plasma located in the field of a longitudinal monochromatic wave of high amplitude is investigated. Interest in this question was aroused by the work of Wharton, Malmberg, and O'Neil (Phys. Fl., 11, 1968, p 1761) in which it was found that such a wave generates satellites whose frequency differs from that of the fundamental wave by an amount of order $1/\tau$, where τ , the characteristic oscillation time of the particles captured by the field of the fundamental wave, is inversely proportional to the charge-to-mass ratio of the electron and to the amplitude and wave number of the fundamental wave. The approach to the problem of the mechanism behind this phenomenon used by the authors employs the distribution function obtained by O'Neil. It is found that the satellites can be generated only for a strong wave that can satisfy the condition $v_\phi v_r / v_T^2 > 1/2$: where v_ϕ is the phase velocity, v_r is the velocity of the captured particles, and v_T is the thermal velocity of the particles.

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USSR

BUD'KO, N. I., et al., Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki,
Vol 61, No 4(10), October 1971, pp 1463-1476

Under experimental conditions, the value of the lefthand side of the inequality above was found to be of the order of unity. The authors express their gratitude to R. Z. Sagdeyev for his comments and to V. S. Knyazyuk for his assistance with the numerical computations. They are members of the Institute of Terrestrial Magnetism, Ionosphere, and Radio Wave Propagation, Academy of Sciences, USSR.

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1/2 011 UNCLASSIFIED
TITLE--SELECTIVE ION EXCHANGERS -U-

PROCESSING DATE--20NOV70

AUTHOR--(02)-RAKOV, E.M., BUBKOV, O.I.

B

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 265,450

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--09MAR70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL PATENT, ION EXCHANGE RESIN, AMINE, PHENOL, PYRIDINE,
AMINO ACID

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FKAME--3002/1405

STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0128804

UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AA0128804

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SELECTIVE ION EXCHANGERS ARE PREPD. BY TREATING ANION EXCHANGERS (OH FORM) CONTG. PRIMARY OR SECONDARY AMINO GROUPS WITH CYANURIC CHLORIDE AT 0-10DEGREES. SUBSEQUENTLY TREATMENT WITH REAGENTS CONTG. SELECTIVE GROUPS, E.G. AMINO ACIDS, HYDROSULFURIC ACID SALTS, MONO AND DIALKYLAMINES, AMINOPHENOLS, ALKALI SOLNS., PYRIDINE, AND ITS DERIVS., IS CARRIED OUT.

UNCLASSIFIED

1/2 018 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--EFFECT OF POLYACRYLAMIDE ON THE SOLUBILITY OF AMMONIUM POLY
PHOSPHATES -U-
AUTHOR-(03)-BEGLOV, V.M., BUDKOV, V.A., GRITSENKO, L.P.
COUNTRY OF INFO--USSR
SOURCE--UZB. KHIM. ZH. 1970, 14(2), 29-31 B
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--POLYMER, ACRYLAMIDE, SOLUBILITY, AMMONIUM PHOSPHATE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--F3008/0925 STEP NO--UR/0291/70/014/002/0029/0031
CIRC ACCESSION NO--AP0137953
UNCLASSIFIED

2/2 018 UNCLASSIFIED PROCESSING DATE--04DEC70
CIRC ACCESSION NO--AP0137953
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AQ. POLYACRYLAMIDE (I) WAS ADDED
TO POWD. AMMONIUM POLYPHOSPHATES (II) OF 0.5-2.5 MM GRAIN SIZE, OBTAINED
BY NEUTRALIZATION OF PERPHOSPHORIC ACID WITH GASEOUS NH SUB3 WITHOUT OR
WITH 1.5 WT. PERCENT LIGNIN ADDED, AND ITS EFFECT ON THE DISSOLN. RATE
IN H SUB2 O AT ROOM TEMP. WAS STUDIED. HIGH I CONCNS. RETARDED THE
DISSOLN. RATE. MIXTS. OF I WITH II HAD A HIGH COAGULATING CAPACITY.
FACILITY: INST. KHIM., TASHKENT, USSR.

UNCLASSIFIED

1/2 011 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--QUALITATIVE STUDY OF SOLID PHASE MIXING IN A FLUIDIZED BED BY A
FREEZING METHOD -U-
AUTHOR-(03)-BUDKOV, V.A., MASLOVSKIY, M.F., PROZOROV, YE.N.
COUNTRY OF INFO--USSR **B**
SOURCE--KHIM. PROM. (MOSCOW) 1970, 46(3), 216-17
DATE PUBLISHED-----70

SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR, CHEMISTRY
TOPIC TAGS--FLUIDIZED BED, SINTERING FURNACE, SAND, QUARTZ, RESIN,
CHEMICAL DEPOSITION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3008/0342

STEP NO--UR/0064/70/046/003/0216/0217

CIRC ACCESSION NO--AP0137446

UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0137446

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN THE "FREEZING" METHOD, A LAYER OF QUARTZ SAND PARTICLES COATED WITH THERMOSETTING RESINS WITH VARIOUS COLORS IS FLUIDIZED FOR 1-2 SEC., THE FLUIDIZED BED COLUMN IS THEN HEATED FOR 30-40 MIN. AT 130DEGREES SO THAT THE PARTICLES ARE "SINTERED" IN A COMPACT MASS, WHICH IS THEN CUT TO EXAM. THE REDISTRIBUTION OF VARIOUS COLORS AS A RESULT OF MIXING DURING THE FLUIDIZATION. EXPTS. WITH 220 MU PARTICLES IN A COLUMN 50 MM IN DIAM. SHOWED THE CURRENTS IN THE CENTER OF THE FLUIDIZED BED EXPAND TO THE ENTIRE LAYER, THE CURRENTS ARE RATHER UNSTABLE, AND THE MOTION IN THE UPPER PART IS THE MOST INTENSIVE; A DOWNWARD MOTION TAKES PLACE NEAR THE WALLS, AND "STAGNANT" REGIONS EXIST NEAR THE PERFORATED GRID. THERE ARE TYPICAL MAX. IN FLOW RATE AND EDDIES AT THE BOUNDARIES BETWEEN UPWARD AND DOWNWARD CURRENTS.

UNCLASSIFIED

1/2 012 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--DETERMINATION OF THE RESIDENCE TIME OF PARTICLES IN HOLLOW REACTION
VESSELS -U-
AUTHOR-(03)-NIKOLAYENKO, V.P., BUDKOV, V.V., AKOPYAN, L.A.
COUNTRY OF INFO--USSR **B**
SOURCE--KPIF. PROM. UKR. 1970, (1), 24-6
DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--DESIGN STANDARD, COMPUTER AIDED DESIGN, ALGEBRAIC EQUATION,
PARTICLE PHYSICS, PARTICLE MOTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAHE--1992/1748 STEP NO--UR/0436/70/000/001/0024/0026
CIRC ACCESSION NO--AP0112734
UNCLASSIFIED

2/2 012 UNCLASSIFIED PROCESSING DATE--20NOV70
CIRC ACCESSION NO--AP0112734
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DESIGN EQUATIONS ARE DEVELOPED FOR
COMPUTER CALCN. OF OPTIMUM HOLLOW (TUBE TYPE) SOLID,GAS REACTORS. THE
EQUATIONS YIELD EITHER RESIDENCE TIMES OF THE DESCENDING SOLIDS,
OPERATING PARAMETERS, OR REACTOR SIZE.

UNCLASSIFIED

1/2 010 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--ASYMPTOTICAL BEHAVIOUR OF FEYNMAN GRAPHS FOR QUASIELASTIC PROCESSES
-U-

AUTHOR--(02)-BUDNEV, V.M., GINSBURG, I.F.

COUNTRY OF INFO--USSR

SOURCE--TEORETICHESKAYA I MATEMATICHESKAYA FIZIKA, 1970, VOL 3, NR 2, PP
171-177

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--ASYMPTOTIC PROPERTY, INTEGER, TOPOLOGY, ELASTIC SCATTERING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3003/0326

STEP NO--UR/0646/70/003/002/0171/0177

CIRC ACCESSION NO--AP0129558

UNCLASSIFIED

2/2 010

UNCLASSIFIED

PROCESSING DATE--27NOV76

CIRC ACCESSION NO--AP0129558

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A SIMPLE RECIPE IS GIVEN TO OBTAIN THE ASYMPTOTICAL BEHAVIOUR OF ANY GRAPH WITH INTEGER SPIN IN THE T CHANNEL FROM ITS TOPOLOGY IN THE THEORY L EQUALS G BAR Ψ GAMMA PRIME5 Ψ PHI PLUS H PHI PRIME4 FOR QUASIELASTIC PROCESSES. IF THE GRAPH HAS TWO PARTICLE DIVISIONS IN THE T CHANNEL, THE RECIPE NEARLY COINCIDES WITH THAT GIVEN IN (1) FOR THE CASE OF ELASTIC SCATTERING. THE ASYMPTOTICAL BEHAVIOUR IS LOGARITHMICAL IN S . THE POWER OF THE LOGARITHM FOR THE CONTRIBUTION OF EVEN SIGNATURE IS DETERMINED ONLY BY THE NUMBER OF TWO PARTICLE DIVISIONS IN THE T CHANNEL. BESIDES THIS, PINCH TYPE CONTRIBUTIONS APPEAR FOR THE CASE ODD SIGNATURE CONTRIBUTIONS. GRAPHS WITHOUT TWO PARTICLE DIVISIONS IN THE T CHANNEL HAVE ASYMPTOTICAL BEHAVIOUR AS SOME NEGATIVE POWER OF S .
FACILITY: INSTITUT MATEMATIKI SIBIRSKOGO OTDELENIYA AKADEMII NAUK SSSR.

UNCLASSIFIED

Organophosphorus Compounds

USSR

UDC 547.269.352:546.185

LEVCHENKO, YE. S., BUDNIK, L. V., Institute of Organic Chemistry,
Academy of Sciences of the Ukrainian SSR

"Derivatives of Iminosulfuric Acid: 1. Reaction of Dialkylamides of
N-Phosphonyl Substituted Sulfamic Acid with Phosphorus Pentachloride"

Leningrad, Zhurnal Organicheskoy Khimii, Vol 6, No 11, Nov 70, pp
2239-2243

Abstract: Dialkylamides of N-phosphonyl substituted sulfamic acid $\text{Alk}_2\text{NSO}_2\text{NHPOX}$ (where $\text{X} = \text{Cl}, \text{OC}_6\text{H}_4\text{NO}_2\text{-p}$) are treated with phosphorus pentachloride to produce dialkylamido-N-phosphonyl substituted iminosulfuryl chlorides of the type $\text{Alk}_2\text{NS}(=\text{O})(+\text{NPOX}_2)\text{Cl}$. The resultant dialkylamido-N-dichlorophosphonyliminosulfuryl chlorides (II) and dialkylamido-N-di-p-bitrodiphenoxyphosphonyliminosulfuryl chlorides (III) are colorless crystals, or liquids which are readily hydrolyzable and distill in a vacuum without dissociation. Protracted boiling of (IIa) or (IIIa) with sodium p-nitrophenylate in a dioxane solution produces a triester (IV). When acid chlorides (II) are interacted with aniline or morpholine, amides (V) and (VI) are synthesized.

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USSR

LEVCHENKO, YE. S., and BUDNIK, L. V., [REDACTED] Leningrad, Zhurnal Organicheskoy Khimii, Vol 6, No 11, Nov 70, pp 2239-2243

Reaction of acid chloride (IIIa) with morpholine results in compound (VII).

Previously undescribed morpholides and piperidides of N-dichlorophosphonyl- and N-di-p-nitrodiphenoxyphosphonylsulfamic acids were produced by the following reaction.

The authors thank A. V. KIRSANOV for assistance and advice during the work.

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USSR

UDC:621.793:661,862,2:533.9.666.763

BUDNIK, N. M., LYAKH, Yu. A., MESHCHERYAKOV, V. M., BOGATIKOV, Ye. N.,
TROITSKIY, V. K.

"Plasma Application of a Protective Coating of Aluminum Oxide on Refractory Materials"

Moscow, Svarochnoye Proizvodstvo, No 12, Dec 73, pp 16-17

Abstract: The Department of Welding of Rostov-na-Donu Institute of Agricultural Machine Building has designed and manufactured an experimental 17 kw plasma installation for application of protective aluminum oxide coatings to refractory materials. The new design increases the operating life of the anode nozzle to 20 hours. The influence of atomizing mode parameters on properties of the coatings produced is studied. A technology is developed for application of aluminum oxide to chamotte materials. Application of protective aluminum oxide coatings to the lining of steel teeming ladles by plasma atomization increases lining life by a factor of 2.

1/1

1/2 016 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--THE INVESTIGATION OF CONTACT MELTING IN THE COPPER MANGANESE SYSTEM

-U-
AUTHOR--(02)-CHULARIS, A.A., BUDNIK, N.M.

B

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, SVAROCHNOYE PROIZVODSTVO, NO 1, 70, PP 9-11

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--COPPER ALLOY, MANGANESE ALLOY, BIBLIOGRAPHY, METAL MELTING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1996/2041

STEP NO--UR/0135/70/000/001/0009/0011

CIRC ACCESSION NO--AP0118995

UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0118995

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PROCESSES WERE INVESTIGATED THAT OCCUR IN CONTACT MELTING IN THE COPPER MANGANESE SYSTEM AT HIGH TEMPERATURES IN A VACUUM. A POSSIBILITY WAS DEMONSTRATED OF USING CONTACT MELTING IN HIGH TEMPERATURE SOLDERING.

UNCLASSIFIED

Coatings

USSR

B

UDC 621.14:21.74.018

RUZHNIK, V. M., LYASH, Ye. A., MESCHCHERYAKOV, V. M., TROITSKIY, V. R., KODATSKAYA, Ye. M., URINSON, A. I., and KHOKHLOV, V. M., Taganrog Metallurgical Plant; Rostov-on-Don Institute of Agricultural Machinery

"Increasing the Resistance of the Lining of Steel-Teeming Ladles"

Moscow, Metallurg, No 8, Aug 70, pp 31-33

Abstract: The resistance of the lining of steel-teeming ladles may be increased by heat-resistant protective coatings applied by the plasma method. The powder to be sprayed passes through a high-temperature zone (10,000-20,000°C) and strikes the surface in a plastic state. The powder particles, possessing high kinetic energy, sinter and form a homogeneous high-quality dense coating of adequate thickness. In most cases it is necessary to heat the surface. Aluminum oxide with a particle size of 80-100 microns was used as the protective coating. The technology of the plasma spraying of Al₂O₃ on silicate brick is described and the technological parameters were obtained. The cohesive strength with the brick was obtained at a 1.4-0.6 mm coating thickness. The aluminum oxide coating applied by the plasma method appears to double the lining's resistance of steel-teeming ladles under service conditions. The yearly savings per 50-ton ladle at the Taganrog Metallurgical Plant amount to 2,650 rubles.

B
Industrial

USSR

UDC:621.791.75

BUZNIK, N.N., Engineer, IVANOV, V.V., Engineer, IVNITSKIY, B.Ya., Engineer, KRAVCHENKO, V.G., Engineer, MAGNITOV, V.S., Senior Engineer, and YAMPOLSKIY, V.M., Candidate of Technical Sciences, Docent

"A Unit for Arc Metal Surfacing in Vacuum"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy, Mashinostroyeniye, No 3, 1970, pp 118-121

Abstract: An SDV-7 unit for arc surfacing with Stellite in a vacuum has been designed and built at the Moscow Higher Technical School im. Bauman. The design of the unit is based on a method of welding and surfacing with nonconsumable electrode in a vacuum, developed by the above mentioned School. Stellite 7 (see Fig. 1) is melted by a DC arc burning between cathode K and the article to be surfaced A--anode. The design of the unit incorporates parts and elements of a standard welding and vacuum equipment. The basic technological specifications of the SDV-7 unit are: volume of the vacuum chamber 300 l, ultimate vacuum in the chamber $5 \cdot 10^{-4}$ mm Hg, operational vacuum $2-3 \cdot 10^{-3}$ mm Hg, time required to achieve operational vacuum 3--4 min, diameter of 1/4

BUDNIK, N.N. et al., Izvestiya Vysshikh Uchebnykh Zavedeniy Mashinostroyeniye, No 3, 1970, pp 118-121

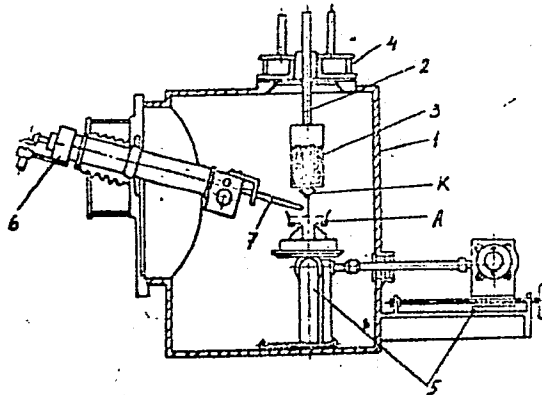


Fig. 1. Diagram of the SDV-7 metal surfacing unit

Stellite rod 6--7 mm, maximum diameter of surfaced articles 300 mm, and power input 10 kw. The unit (see Fig. 1) consists of a working
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BUDNIK, N.N. et al., Izvestiya Vysshikh Uchebnykh Zavedeniy Mashinoz-troyeniye, No 3, 1970, pp 118-121

chamber of the vacuum system, welding gun with a mechanism for the vertical movement of a filler rod (Stellite), mechanism for rotating and longitudinal movement of the surfaced part, control panel, and power supply for the welding arc. The vacuum chamber, made of 1Kh18N9T stainless steel plate, 6 mm thick, is reinforced with V-shaped channels. Parts to be surfaced are loaded into the chamber through a hatch which seals hermetically by means of a vacuum seal and four lever clamps. The welding gun with a vertical movement mechanism, and electromagnet and electric arc supply terminals are located in the upper part of the chamber. A filler rod feeding mechanism and a valve for letting the air into the chamber are located in the side walls of the chamber. For visual observation of the surfacing process the chamber is fitted with three plastic windows, 20--25 mm thick. The vacuum system of the SDV-7 unit consists of a VN-4G preliminary vacuum pump, BN-3 high vacuum pump, vacuum shut-off valves, and connecting pipes. The degree of vacuum is controlled by VT-3 and VM-1 vacuumeters. The welding gun consists of a water-cooled cathode and electromagnet 3. The electromagnet winding is made of an 8 mm copper tube. Cooling water is fed through special inlets 4 in one of the chamber's collars. The mechanism 5 for the movement of the part is

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BUDNIK, N.N. et al., Izvestiya Vysshikh Uchebnykh Zavedeniy Mashinostroyeniye, No 3, 1970, pp 118-121

capable of moving the part longitudinally with a speed of 0 to 22 m/hr and rotate it at 0--6 RPM. The filler material feeding mechanism consists of a DC motor, reducer and feed rollers. It can hold either 6--7 mm diameter rods or a 20 mm wide strip. Smooth control of the feed rate in the 9--80 cm/min range, and reverse moving of the rod is accomplished by varying the voltage in the DC motor winding. The control panel is located right on the chamber. Welding transformer of the PS-500-type is used as an arc power supply. An industrial variant of this unit for arc surfacing of valve parts is being designed.

1/2 046 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--ROLE OF PHONONS IN THE STIMULATED EMISSION OF CDS SUBX NEGATIVE SE
SUBI MINUS X CRYSTALS DURING TWO PHOTON EXCITATION -U-
AUTHOR-(03)-BRODIN, M.S., BUDNIK, P.I., REZNICHENKO, V.YA.
COUNTRY OF INFO--USSR *B*
SOURCE--FIZ. TVERD. TELA 1970, 12(3), 710-15
DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--LASER RADIATION, STIMULATED EMISSION, EMISSION SPECTRUM,
CADMIUM SULFIDE, SELENIDE, EXITON, PHONON SPECTRUM, CRYOGENIC PROPERTY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1987/1984 STEP NO--UR/0181/70/012/003/0710/0715

CIRC ACCESSION NO--AP0105058
UNCLASSIFIED

2/2 046

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0105058

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AT 4 AND 77DEGREE SK,
INVESTIGATIONS WERE CARRIED OUT OF THE SPECTRA OF STIMULATED RADIATION
OF THE SOLID SOLN. CDS SUBX SE SUBNEGATIVEX OF VARIOUS COMPNs. IN 2
PHOTON EXCITATION BY A RUBY LASER, AND THE CONDITIONS WERE ANALYZED FOR
THE APPEARANCE IN THE PROCESS OF GENERATION OF A COMPLEX PHONON SPECTRUM
FOR FREE AS WELL AS FOR BOUND EXCITONS. FOR CRYSTALS WITH A PREDOMINANT
CONTENT OF 1 OF THE COMPONENTS AT 77DEGREE SK, GENERATION TAKES PLACE ON
FREE EXCITATIONS WITH PARTICIPATION OF 1 LONGITUDINAL OPTICAL PHONON (LO
SUB1 OR LO SUB2). FOR CRYSTALS WITH COMPARABLE CONCNS., BOTH LO SUB1
AND LO SUB2 PARTICIPATE IN THE PROCESS OF GENERATION (2 PHONON
TRANSITIONS). WHEN TEMP. DECREASES TO 4DEGREE SK, WHEN GENERATION TAKES
PLACE ON BOUND EXCITATIONS DEPENDING ON THE MAGNITUDE AND SPECTRAL
DISTRIBUTION OF LOSSES, FOR SOME CRYSTALS, TRANSITIONS CAN BE REALIZED
WITH RADIATION OF LONGITUDINAL OPTICAL PHONONS AND WITHOUT THE
RADIATION. FACILITY: INST. FIZ., KIEV, USSR.

UNCLASSIFIED

1/2 027 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--TEMPERATURE DEPENDENCE OF STIMULATED RADIATION FROM ZNS SUBX,CDS
SUBI-X CRYSTALS DURING TWO PHOTON EXCITATION -U-
AUTHOR-(04)-BRODIN, M.S., BUDNIK, P.I., VITRIKHOVSKIY, N.I., ZAKREVSKIY,
S.V.
COUNTRY OF INFO--USSR
SOURCE--FIZ. TEKH. POLUPROV. 1970, 4(3), 522-6
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--ZINC SULFIDE, CADMIUM SULFIDE, LUMINESCENCE, PHONON, MIXED
CRYSTAL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1994/0989 STEP NO--UR/0449/70/004/003/0522/0526
CIRC ACCESSION NO--AP0115010
UNCLASSIFIED

2/2 027

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0115010

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STIMULATED AND SPONTANEOUS LUMINESCENCE OF MIXED CRYSTALS OF ZNS (9PERCENT) AND CDS (91PERCENT) AT 4DEGREESK ARE STUDIED; ALSO, THE TEMP. DEPENDENCE OF FREQUENCY AND THE MECHANISM OF STIMULATED RADIATION IN THE 4-120DEGREESK RANGE ARE DISCUSSED. AT COMPARATIVELY LOW TEMPS. (4-66DEGREESK) LASING OF THE CRYSTAL OCCURS VIA BOUND OR RECOMBINED EXCITONS. BETWEEN 66 AND 120DEGREESK, LASING ARISES THROUGH FREE EXCITONS WITH LINEAR OPTICAL PHONON PARTICIPATION. FACILITY: INST. FIZ., KIEV, USSR.

UNCLASSIFIED

USSR

UDC 621.791.856:669.715

RABKIN, B. M., IVANOVA, O. N., STEBLOVSKIY, B. A., and ~~BUDNIK,~~
~~V. P.~~

"Straight-Polarized DC Welding of Aluminum Alloys"

Kiev, Avtomaticheskaya Svarka, No 3, Mar 71, pp 71-72

Abstract: Welding with straight polarized direct current is of significant interest from the point of view of increasing the fusion capacity of the arc and the possibility of forcing the welding conditions. It is necessary to remove sufficient oxides from the weld metal to obtain a high-quality joint during this welding process. This paper contains the results of an effort at the Institute of Electric Welding to achieve these goals when welding aluminum alloys by a straight polarized DC arc. Helium, argon, and their mixtures were used as shielding gases. It was found that straight polarized DC welding of aluminum alloys in helium without filler wire gives an even, bright surface. Good protection of the weld metal was insured by A-954 and A-1272 torches. High-quality welds were obtained with aluminum alloys 3, 8, 10, 15, and 20 mm thick in one pass without toe dressing.
1/1

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USSR

UDC 621.385.6 (C88.8)

BUDNIK, V.V., SHOFMAN, L.I

"Filter Of Power Supply Lead-Ins Of Mitron"

USSR Author's Certificate No 305520, filed 16 Feb 70, published 23 July 71
(from RZh:Elektronika i yeye primeneniye, No 2, Feb 72, Abstract No 2A167P)

Translation: A filter is proposed for the power supply lead-ins of a mitron of the decimeter wave range. In order to decrease the microwave radiations of the power circuit it is made in the form of a spiral delay system located at the interior dielectric core, with a film absorbing layer which makes contact with the turns of the spiral.

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USSR

UDC 621.372.8:621.385.63(088.5)

BUDNIK, V. V.

"A Method of Checking the Mutual Displacement of the Combs in an Opposed-Pin Decelerating System"

USSR Author's Certificate No 254590, Filed 20 Aug 68, Published 25 Mar 70 (from RZh-Radiotekhnika, No 10, Oct 70, Abstract No 10B139 P)

Translation: The proposed method of checking the mutual displacement of the combs in an opposed-pin decelerating system is based on utilizing a panoramic SWR indicator connected with the system. To simplify and accelerate the checking process, the mutual comb displacement where electrical symmetry of the decelerating system is reached is determined from the smallest frequency interval between the SWR minima on the working wavelengths closest in value to four times the height of a pin in the system.

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USSR

UDC 621.385.632

B
BUDNIK, V. V., KHAKHILEVA, G. A.

"Use of Panoramic Voltage Standing-Wave Ratio Meters for Measurement of Matching of Absorbers of Helix Traveling-Wave Tubes"

Elektron. tekhnika. Nauchno-tekhn. sb. Elektron. SVCh (Electronic Technology. Scientific-Technical Collection. Microwave Electronics), 1970, No 1, pp 128-136 (from RZh-Elektronika i yeye primeneniye, No 7, July 1970, Abstract No 7A 138)

Translation: A method is described for measurement of the matching of absorbers of helix TWT with the aid of panoramic voltage standing-wave ratio meters. Use of the latter considerably shortens the time necessary for evaluation of the quality of matching of the absorber and can assure measurement of the voltage standing-wave ratio of the absorber at a level of 1.03 with a rms error not more than plus or minus 3 percent. 2 ref. Summary.

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BUDNIKOV, NIKOLAY PAVLOVICH

PETROLEUM PROSPECTING

FUELS AND RELATED EQUIPMENT

Source: JPRS#61195
11 Feb 74

UDC 553.981/982:551.462.35(571.62)"113"

SAKHALIN ISLAND SHELF PROSPECTING FOR OIL AND GAS FIELDS
[Article by N. P. Budnikov of the USSR Ministry of Geology, ¹⁰ ~~the~~ ¹¹ ~~the~~ ¹² ~~the~~ ¹³ ~~the~~ ¹⁴ ~~the~~ ¹⁵ ~~the~~ ¹⁶ ~~the~~ ¹⁷ ~~the~~ ¹⁸ ~~the~~ ¹⁹ ~~the~~ ²⁰ ~~the~~ ²¹ ~~the~~ ²² ~~the~~ ²³ ~~the~~ ²⁴ ~~the~~ ²⁵ ~~the~~ ²⁶ ~~the~~ ²⁷ ~~the~~ ²⁸ ~~the~~ ²⁹ ~~the~~ ³⁰ ~~the~~ ³¹ ~~the~~ ³² ~~the~~ ³³ ~~the~~ ³⁴ ~~the~~ ³⁵ ~~the~~ ³⁶ ~~the~~ ³⁷ ~~the~~ ³⁸ ~~the~~ ³⁹ ~~the~~ ⁴⁰ ~~the~~ ⁴¹ ~~the~~ ⁴² ~~the~~ ⁴³ ~~the~~ ⁴⁴ ~~the~~ ⁴⁵ ~~the~~ ⁴⁶ ~~the~~ ⁴⁷ ~~the~~ ⁴⁸ ~~the~~ ⁴⁹ ~~the~~ ⁵⁰ ~~the~~ ⁵¹ ~~the~~ ⁵² ~~the~~ ⁵³ ~~the~~ ⁵⁴ ~~the~~ ⁵⁵ ~~the~~ ⁵⁶ ~~the~~ ⁵⁷ ~~the~~ ⁵⁸ ~~the~~ ⁵⁹ ~~the~~ ⁶⁰ ~~the~~ ⁶¹ ~~the~~ ⁶² ~~the~~ ⁶³ ~~the~~ ⁶⁴ ~~the~~ ⁶⁵ ~~the~~ ⁶⁶ ~~the~~ ⁶⁷ ~~the~~ ⁶⁸ ~~the~~ ⁶⁹ ~~the~~ ⁷⁰ ~~the~~ ⁷¹ ~~the~~ ⁷² ~~the~~ ⁷³ ~~the~~ ⁷⁴ ~~the~~ ⁷⁵ ~~the~~ ⁷⁶ ~~the~~ ⁷⁷ ~~the~~ ⁷⁸ ~~the~~ ⁷⁹ ~~the~~ ⁸⁰ ~~the~~ ⁸¹ ~~the~~ ⁸² ~~the~~ ⁸³ ~~the~~ ⁸⁴ ~~the~~ ⁸⁵ ~~the~~ ⁸⁶ ~~the~~ ⁸⁷ ~~the~~ ⁸⁸ ~~the~~ ⁸⁹ ~~the~~ ⁹⁰ ~~the~~ ⁹¹ ~~the~~ ⁹² ~~the~~ ⁹³ ~~the~~ ⁹⁴ ~~the~~ ⁹⁵ ~~the~~ ⁹⁶ ~~the~~ 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Glass and Ceramics

USSR

UDC 666.018.83

BUDNIKOV, P. P., and KHARITONOV, F. Ya.

Keramicheskiye Materialy Dlya Agressivnykh Sred (Ceramic Materials for Aggressive Media), Moscow, "Izdatel'stvo Literatury po Stroitel'stvu," 1971, 272 pages

Translation of Annotation: This book propounds the theory of corrosion of ceramic materials, generalizes and systematizes bibliographical data, and presents a description of the properties and resistance of the most widespread ceramic materials in aggressive media. It describes the nature of the corrosive effect of the media on materials, as well as the methods and results of corrosion tests in acids, alkalis, metal melts and vapor, and other media.

This book is intended for engineering-technical and scientific personnel connected with the development and utilization of installations with aggressive media, as well as for specialists in the ceramic and chemical industry, chemical machine building, and other industrial sectors dealing with the development and application of new ceramic materials resistant to the effect of aggressive media.

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BUDNIKOV, P. P., and KHARITONOV, F. Ya., "Izdatel'stvo Literatury po Stroitel'stvu," 1971, 272 pp

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BUDNIKOV, P. P., and KHARITONOV, F. Ya., "Izdatel'stvo Literaturny po Stroitel'stvu," 1971, 272 pp

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USSR

BUDNIKOV, P. P., and KHARITONOV, F. Ya., "Izdatel'stvo Literaturny po Stroitel'stvu," 1971, 272 pp

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4/6

USSR

FEDNIKOV, P. P., and KHARITONOV, F. Ya., "Izdatel'stvo Literaturny po Stroitel'stvu," 1971, 272 pp

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5/6

USSR

BUDNIKOV, P. P., and KHARITONOV, F. Ya., "Izdatel'stvo Literaturny po Stroitel'stvu," 1971, 272 pp

3. The Corrosion of Ceramic Materials in Fused Lead, Bismuth, and Their Alloys 241
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6/6

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USSR

UDC 620.193.5:546.623-31:546.45-31

BUDNIKOV, P. P., BELYAYEV, R. A., VOLODIN, P. L., RAKHALIN, N. A., FURAYEV, V. A., and TUMBAKOVA, M. I.

"The Corrosion of Aluminum and Beryllium Oxides in Gaseous Ammonia at 200-800°C"

Leningrad, Zhurnal Prikladnoy Khimii, Vol XLIV, No 1, Jan 71, pp 54-59

Abstract: Data on the corrosion resistance of fused samples of beryllium and aluminum oxides in gaseous ammonia are virtually absent in the literature.

This study deals with liquid synthetic ammonia, Grade 1, GOST 6221-52, 99.94% pure, and 99.5% pure beryllium oxide with a specific surface of 4.5 m²/g. After processing, samples were placed in streams of ammonia gas at various temperatures and flow rates, for various periods (200-800°C; 7.5-12.8 m/sec; 3-10 hr). After each test the ammonia gas was checked for decomposition, which might occur at high temperatures.

Gravimetric, metallographic and electron-microscope studies of the surface, revealed no corrosion of either oxide in the 200-800°C range. An ammonia

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USSR

BUDNIKOV, P. P., et al., Zhurnal Prikladnoy Khimii, Vol XLIV, No 1, Jan 71,
pp 54-59

gas flow of 10 m/sec had neither a corrosive nor an erosive effect in the
250-350°C range.

2/2

Beryllium

USSR

UDC 548.55 : 546.45-31

BUDNIKOV, P. P., and SANDULOV, D. B.

"Preparation and Study of Beryllium Oxide Single-Crystal Whiskers"

Leningrad, Zhurnal Prikladnoy Khimii, Vol 43, No 8, Aug 70, pp 1649-1653

Abstract: Beryllium oxide single-crystal whiskers were obtained by heating metallic beryllium filings in an argon environment. The heating was done in a quartz glass vessel at 1450-1500°. The metallic beryllium filings were placed on a beryllium oxide substrate. A microscopic study showed that most of the whiskers have a metallic bead at the end. In some cases several whiskers grew from one bead. It is assumed that the crystal growth mechanism is as follows: vapor → liquid → whisker. The resultant whiskers underwent chemical and spectral analyses. The content of the principal impurities detected by spectral analysis did not exceed $6.0 \cdot 10^{-3}$ wt. percent, with a relatively high silicon content. Ring electron-diffraction patterns were taken in an attempt to determine the phase of which the bead consists. Beryllium oxide lines were found to be present, as well as lines with the interplanar spacings 1.587, 1.425, 1.071, 1.035, and 0.970 Å, which could not be identified. A more detailed study of the crystals on a superhigh-voltage electron microscope

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USSR

BUDNIKOV, P. P., and SANDULOV, D. B., Zhurnal Prikladnoy Khimii, Vol 43, No 8, Aug 70, pp 1649-1653

with an accelerating voltage of 400 kV (557 kev) showed that the whisker surface is smooth even under great magnifications. No twinning is observed in the crystals. The strength characteristics of the whiskers were determined on an instrument designed by V. N. ROZHANSKIY, intended for tensile testing of whiskers and simultaneous recording of tension curves on an N-700 oscillograph.

The authors thank V. N. ROZHANSKIY and A. S. PREDVODITELEV for their advice and assistance.

2/2

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B

Science and Technology

USSR

0110-0111-1111-1111

SUDNIKOV, V. I., KORSHAKOV, V. I., and ZATSEV, I. I.

"Hot Pressing of Beryllium Oxide and Strength of Fabricated Specimens"

Leningrad, Zhurnal Prikladnoy Khimii, Vol 45, No 9, Sep 70, pp 1441-444

Abstract: Beryllium oxide powder precalcined in air, then compacted in a liquid press mold under a pressure of 500 kg/cm², was used as the starting material for hot pressing. The hot pressing was performed in graphite plates at high temperatures (up to 1600°) in a vacuum of 10⁻³ mm Hg. For all specimens above 1600° a molybdenum layer was placed between the graphite plates to prevent the interaction of beryllium oxide with carbon. The carbon content of specimens obtained by hot pressing was 0.12 weight percent and increased by the same as that of the initial powder. The pressing pressure and temperature had a significant effect on the volume weight of the specimens only at low temperatures. Crystal size increases with increased pressing pressure. X-ray diffraction studies showed the existence of preferred orientation of beryllium oxide crystals in the specimens obtained by hot pressing. The structural strength of the specimens was studied at room temperature. Maximum strength was observed in specimens with a crystal size of 0.5-1.0 microns.

1/1

1/2 009 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--SOME PECULIARITIES OF THE EFFECT OF SODIUM TRIPOLY PHOSPHATE ON
PORTLAND CEMENT SLIMES -U-
AUTHOR-(03)-BUDNIKOV, P.P., ENTIN, Z.B., BABIN, G.A.
COUNTRY OF INFO--USSR
SOURCE--KOLLOIDNYY ZHURNAL, 1970, VOL 32, NR 3, PP 333-336
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--CEMENT, SODIUM PHOSPHATE, CALCIUM SULFATE, COLLOID
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--2000/1586 STEP NO--UR/0069/70/032/003/0333/0336
CIRC ACCESSION NO--AP0125208

2/2 009

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125208

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. 0.05-0.2PERCENT OF SODIUM
TRIPOLYPHOSPHATE INTRODUCED INTO CEMENT PRODUCES A SIGNIFICANT
LIQUEFYING EFFECT, WHICH IS ASSOCIATED WITH THE EXCHANGE ADSORPTION
INTERACTION IN COLLOID DISPERSE SYSTEMS AND DOES NOT DEPEND ON THE
MINERALOGICAL COMPOSITION OF SLIME, UNLESS IT CONTAINS CALCIUM SULPHATE.
FACILITY: KHMINKO-TEKHNOLOGICHESKIY INST. IM. D. I.
MENDELEYEVA, MOSCOW.

1/2 010 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--SYNTHESIS OF CALCIUM SILICATE HYDRATES FROM NONAQUEOUS SOLUTIONS
AND A STUDY OF THE PROPERTIES OF $2\text{CaO} \cdot \text{SiO}_2$ SUBZ PREPARED FROM IT -U-
AUTHOR--(03)-BUDNIKOV, P.P., KUZNETSOVA, I.P., SAVELYEV, V.G.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., KHIM. KHIM. TEKHNOL. 1970, 13(1), 96-9

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CALCIUM COMPOUND, SILICATE, HYDRATE, HYDRATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAHE--1997/1388

STEP NO--UR/0153/70/013/001/0096/0099

CIRC ACCESSION NO--AT0120181

UNCLASSIFIED

2/2 010

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AT0120181

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CA HYDRATED SILICATE, OF COMPN.

1.7CAO.SIO SUB2.2.9H SUB2 O AND 1.7CAO.SIO SUB2.3.2H SUB2 O, CONTG. 0.30 AND 1.96 WT. PERCENT NA SUB2 O, IS PREPARED. IN A FIBROUS AND VERY FINE PLATELIKE TOBERMORITIC FORM BY HOMOGENIZING ALC. SOLNS. OF SI(0ET) SUB4 AND CACL SUB2 IN 1:2 MOLE RATIO, ADDING THE NECESSARY AMT. OF AQ. NAOH FOR SAPONIFICATION, SEPG. THE MOTHER LIQUOR, AND WASHING WITH 80PERCENT ETCH TO FREE THE PPT. FROM NA POSITIVE AND CL NEGATIVE. THE LOWER CONTENT OF NA SUB2 O IS OBTAINED BY LONGER WASHING. THE ANHYD. 2CAO.SIO SUB2 IS OBTAINED BY FIRING AT 800-1500DEGREES FOR 3 HR AT THE MAX. TEMP.

SAMPLES CONTG. BOTH THE LESSER AND GREATER AMOUNTS OF NA SUB2 O FIRED AT 800DEGREES CONSISTED OF BETA 2CAO.SIO SUB2 AND SHOWED THE GREATEST STRENGTH AFTER HYDRATION AND AGING; WITH THE LOWER AMT. OF NA SUB2 O, THE SAMPLE FIRED AT 1500DEGREES CONSISTED OF GAMMA 2CAO.SIO SUB2 AND SHOWED THE LOWEST STRENGTH AFTER HYDRATION AND AGING. SAMPLES CONTG. THE LARGER AMT. OF NA SUB2 O AND FIRED AT 1000-1500DEGREES RETAINED BETA 2CAO.SIO SUB2, AND EXHIBITED INTERMEDIATE STRENGTH AFTER HYDRATION AND AGING. FACILITY: MOSK. KHIM. TEKHNOL. INST. IM. MENDELEEVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 018 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--CATALASE ACTIVITY OF COMPLEXES OF TRANSITION METALS WITH SOME
NITROGEN CONTAINING ML SUB2 TYPE LIGANDS, AND CHARGE TRANSFER -U-
AUTHOR--(02)--SYCHEV, A.YA., BUDNIKOV, S.S.

COUNTRY OF INFO--USSR

SOURCE--ZH. FIZ. KHIM. 1970, 44(1), 106-10

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--COMPLEX COMPOUND, TRANSITION METAL, REACTION KINETICS,
HYDROGEN PEROXIDE, CHEMICAL DECOMPOSITION, MANGANESE COMPOUND, IRON
COMPOUND, COBALT COMPLEX, NICKEL COMPLEX, COPPER COMPLEX, CATALASE,
PYRIDINE COMPLEX

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/1209

STEP NO--UR/0076/70/044/001/0106/0110

CIRC ACCESSION NO--AP0128627

UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0128627

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. KINETICS OF THE $H\ SUB2\ O\ SUB2$ DECOMPN. CATALYZED BY O,PHENANTHROLINE I COMPLEXES OF MN PRIME2 POSITIVE, FE PRIME2 POSITIVE, CO PRIME2 POSITIVE, NI PRIME2 POSITIVE, AND CU PRIME2 POSITIVE WAS STUDIED AT 25DEGREES, PH 6.5 (FOR FE PRIME2 POSITIVE AT PH 8.0), AND METAL TO I RATIO 1:2. THE CATALYTIC ACTIVITY DECREASES IN ORDER MN LARGER THAN FR LARGER THAN CO LARGER THAN CU LARGER THAN NI. QUANTUM CHEM. CALCNS. OF THESE COMPLEXES WITH I AND BIPYRIDINE II TYPE ML SUB2 (D SUB4H SYMMETRY ASSUMED) USING MULLIKAN WOLASSBERG HELMHOLTZ METHODD. WERE PERFORMED FOR THE STATES WITH CHARGE 0, 1 PLUS AND 2 PLUS. THE VALUES OF THE REDOX CAPACITIES AND CHARGES TRANSFERRED BY $H\ SUB2\ O\ SUB2$, $HU\ SUB2$ TIMES, AND $HO\ SUB2$ PRIME NEGATIVE SPECIES WERE ESTD. COMPLEX EQUIL. AMONG DIFFERENT TYPES OF COMPLEXES PLAY AN IMPURTANT ROLE IN THE CHANGES OF CATALYTIC ACTIVITY. FACILITY: KISHINEV. GOS. UNIV., KISHINEV, USSSR.

UNCLASSIFIED

AA0047834- ...

UR 0482

Soviet Inventions Illustrated, Section III Mechanical and General,
Derwent, 1-70

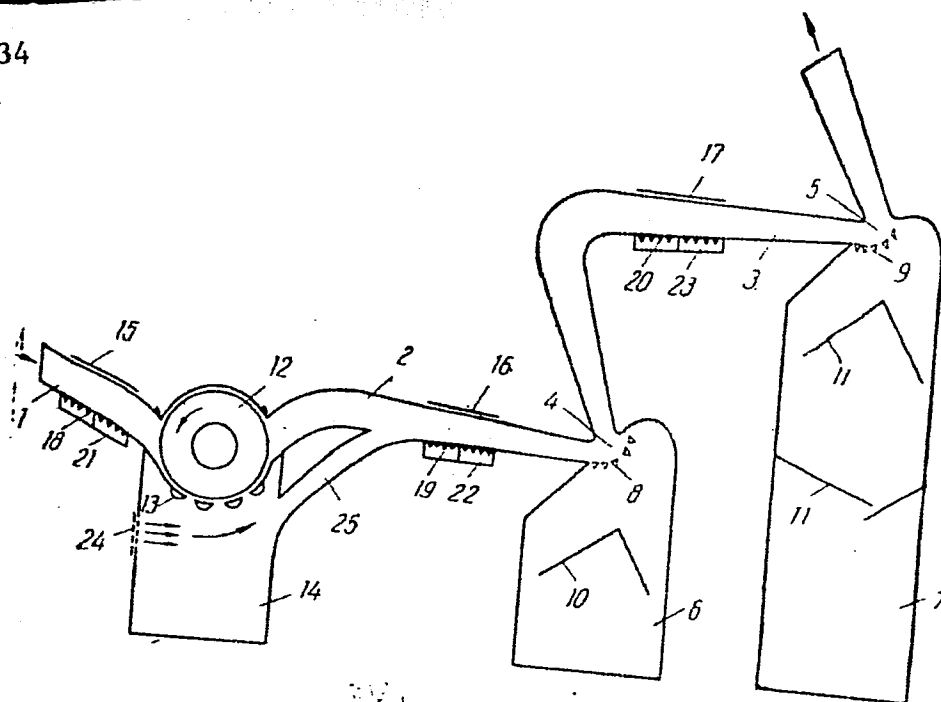
240906 AERODYNAMIC CLEANING OF FIBROUS MATERIALS
whereby the efficiency of the process,

based on the inherently differing inertia of fibres and waste materials is improved by subjecting the material to the action of electrostatically charged fields during its passage through the system. The fibrous material passes in an air current along tubes 1, 2 & 3, which have sharp bends and form separate cleaning sections. During its passage, the material is subjected to the action of electrostatic fields created by oppositely charged electrodes. This causes better separation, and hence more efficient cleaning of the fibres. The separated waste material falls through gratings into the waste chambers located under each cleaning section.

18.10.63. as 861608/28-12, BUDNIKOV, V.I. and KARIMOV, KH. A. (14.8.69) SU. 13/1.4.69. Class 29a, Int. Cl. D 01b.

19791485

AA0047834



19791486

1/2 028 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--THE STUDY OF MICROWAVE ABSORPTION BY PLASMA IN A MAGNETIC FIELD -U-
AUTHOR--(03)-BUDNIKOV, V.N., GOLANT, V.E., OBUCHOV, A.A.
COUNTRY OF INFO--USSR
SOURCE--PHYS. LETTERS (NETHERLANDS), VOL. 31A, NO. 2, P. 76-7 (26 JAN. 1970)
DATE PUBLISHED--26JAN70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--ELECTROMAGNETIC WAVE ABSORPTION, MICROWAVE PLASMA, HIGH FREQUENCY DISCHARGE, PLASMA DENSITY, MAGNETIC FIELD INTENSITY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1986/0084 STEP NO--NE/0000/70/000/002/0076/0077
CIRC ACCESSION NO--AP0102174
UNCLASSIFIED

2/2 028

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0102174

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DATA ON MICROWAVE DISCHARGE FORMED AT MAGNETIC FIELD VALUE HIGHER THAN THE CYCLOTRON FIELD (H EQUALS 1 DIVIDED BY $3H$ SUBC) AND A DENSITY EXCEEDING THE CRITICAL (N EQUALS 1 DIVIDED BY $15N$ SUBC) ARE GIVEN. THE CONDITIONS UNDER WHICH THE DISCHARGE EXISTS ARE DETERMINED BY THE CONDITIONS OF H.F. WAVE ABSORPTION BECAUSE OF THE LINEAR TRANSFORMATION EFFECT.

FACILITY: A. F. IOFFE PHYSICO TECHNICAL INST., LENINGRAD, USSR.

UNCLASSIFIED

USSR

UDC 581.192+63.3.11

TAVADZE, T. V. and BUDNITSKAYA, Ye. V., Institute of Biochemistry, Academy of Sciences USSR

"Change in the Content of Total Protein and Nitrogen During the Ontogenesis of Wheat Varieties Resistant to Brown Rust Infection and Those Susceptible to It"

Moscow, Prikladnaya Biokhimiya i Mikrobiologiya, Vol 9, No 4, 1973, pp 579-581

Abstract: In a study of change in the content of total protein and nitrogen during the ontogenesis of wheat varieties resistant to brown rust infection and those susceptible to it, it was found that the decrease in the total protein content of susceptible wheat varieties is greater than that of the resistant ones. It was also noted that in all stages of ontogenesis except for the case of 5- and 10-day seedlings, the nitrogen content in the resistant varieties was higher than in the tissues of the susceptible ones. The assumption is drawn that the obtained data are a result of changes in the content of total protein and nitrogen in connection with the resistance of wheat plants to brown rust infection. 2 tables. 8 references.

1/1

- 62 -

Acc. Nr: **AP0038113**

Ref. Code: UR 0326

PRIMARY SOURCE: Fiziologiya Rasteniy, 1970, Vol 17, Nr 1,
pp 112-115

INVESTIGATION OF EXCHANGE OF HEAVY OXYGEN WATER IN
TISSUES OF IRRADIATED PLANTS

Budnitskaya, Ye. V.; Poluektova, L. N.

A. N. Bakh Institute of Biochemistry, USSR Academy of Sciences, Moscow

Permeability of H_2O^{18} in normal bean leaves irradiated by X-rays is studied with a mass-spectrometer. The exchangeability of water involved in metabolism of the plants was higher in irradiated leaves.

REEL/FRAME
19731164

USSR

UDC: 621.317.733

BUDNITSKAYA, Ye. A., NOVIK, A. I., SMOLYAR, Yu. A., TUCHIN, R. D., FESHCHENKO, N. A., KHAZANOV, V. M.

"Some Circuits for Temperature Compensation of AC Bridges"

Dokl. Vses. nauchno-tekhn. konferentsii po radiotekhn. izmereniyam. T. 1 (Reports of the All-Union Scientific and Technical Conference on Radio Engineering Measurements. Vol. 1), Novosibirsk, 1970, pp 19-21 (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12A351)

Translation: The authors discuss the general principles of temperature compensation of AC bridges. A simplified transformer bridge circuit with temperature compensation of the reference specimen is given by way of example. Two illustrations. N. S.

1/1

- 83 -

USSR

UDC 681.327.12

B
RUDNYAK, A. A., OSMOLOVSKIY, YU. F., PETRENKO, A. I., SAKUN, V. A.,
FESECHKO, V. A., Kiev "Order of Lenin" Polytechnical Institute imeni
the Fiftieth Anniversary of the October Revolution

"A Color-Recognition Device"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye
Znaki, No 4, 1970, p 103, patent No 260983, filed 17 Nov 67

Abstract: This Author's Certificate introduces a color-recognition device based on patent No 219923. As a distinguishing feature of the patent, the speed of the device is increased and its overall size is reduced by making the radiation photoreceiver in the form of an electro-magnetic electron stream commutation system with three sections in the photocathode of the photomultiplier. This system consists of three electromagnets with optical filters between their poles. These electromagnets are connected through bidirectional switches to a ring commutator which alternates the direction of the magnetic fluxes in the electromagnets. This commutator connects the reference phase of the voltage to a phase meter.

1/1

USSR

UDC: 669.725.472

YEVSEYEV, Yu. N., BUDON, V. D., ZAZUBIN, A. I., KUNAYEV, A. M.

"Cathode Polarization in a Melt of Lithium and Beryllium Fluorides"

Katodnaya Polyarizatsiya v Rasplave Ftoridov Litiya i Berilliya [English version above], Alma-Ata, 1972, 6 pp (Translated from Referativnyy Zhurnal Metallurgiya, No 8, 1973, Abstract No 8G193DEP, by the authors).

Translation: A study of the polarization of an Mo cathode in eutectic melts of Li and Be fluorides has shown that electric separation of Be occurs practically without an overvoltage. The Be ions discharge when the cathode potential is reached, equal to the equilibrium potential of a Be electrode in a fluoride melt. Calculation of limiting electrolysis currents according to Fick's law shows that the true D_c lags behind the geometrically calculated value by a factor of 5-8.

1/1

- 17 -

Corrosion

USSR

UDC: 669.715:620.193

BUDOV, G. M., KALININ, V. D.

"Corrosion Behavior of Aluminum Alloys for Construction Structures"

Tekhnol. Legkikh Splavov. Nauch.-Tekhn. Byul. VILSa [Technology of Light Alloys. Scientific and Technical Bulletin of All-Union Institute for Light Alloys], 1973, No 3, pp 60-64 (Translated from Referativnyy Zhurnal Metallurgiya, No 8, 1973, Abstract No 8I685, by the authors).

Translation: The corrosion behavior of Al alloys is studied under various atmospheric conditions over a period of 5 years. The alloys AMg2P and AD31 are recommended for use in construction structures, while 1951 alloy is recommended for wide-scale testing. 3 figures, 2 tables, 9 biblio. refs.

1/1

1/2 .023 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--RESISTANCE OF ALUMINUM ALLOYS IN VARIOUS CORROSIVE MEDIA -U-

AUTHOR--(05)-BUDDOV, G.M., GUZEYEV, E.A., YEFIMOV, I.A., SMETANINA, N.G.,
FLAKS, V.YA.

COUNTRY OF INFO--USSR

SOURCE--PROM. STROIT. 1970, (1), 40-2

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--ALUMINUM ALLOY, ALUMINUM CORROSION, ALLOY DESIGNATION,
CHLORINE, HYDROGEN SULFIDE, CARBON DISULFIDE, INDUSTRIAL PLANT, SULFUR
OXIDE, OCEAN, ARCTIC TEST/(U)DIBT ALUMINUM ALLOY, (U)B95T1 ALUMINUM
ALLOY, (U)AK6T1 ALUMINUM ALLOY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--1984/1298

STEP NO--UR/0227/70/000/001/0040/0042

CIRC ACCESSION NO--AP0055969

UNCLASSIFIED

2/2 - 023

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0055969

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CORROSION OF D16-T, B95-T1, AND
AK6-T1 AL ALLOYS (COMPN. NOT GIVEN) WAS DETD. BY A 2 YR EXPOSURE ON THE
SHORE OF THE ARCTIC OCEAN AND AT INDUSTRIAL PLANTS. THE RESULTS ARE
GIVEN. THE LOSS STRENGTH WAS GREATER ON THE SHORE THAN AT THE PLANTS.
AT THE INDUSTRIAL PLANTS, CL BEARING ATMS. CAUSED GREATER CORROSION THAN
THOSE CONTG. SO SUB2, H SUB2 S, OR CS SUB2.

UNCLASSIFIED

AA0043502

BUDOV V.M.

3

UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent, 12-4

228341 CONTROL OF THE CONDITIONS OF GLASS MELT

The installation contains gauge of the fuel consumption (1, V_f), gauge of air consumption (2, V_g), gauge of argon percentage content in the flue gases (4, $(CO_2)^d$), scaler amplifier (5), multiplier unit (6), divider unit (7), adders (8) and (9) integrator (10), source of reference potential (11) null-indicator (12).

The coefficient of amplifier (5) is made equal to gravimetric carbon content in the unit of fuel consumption. Gauges (3) and (4) are mass-spectrometers.

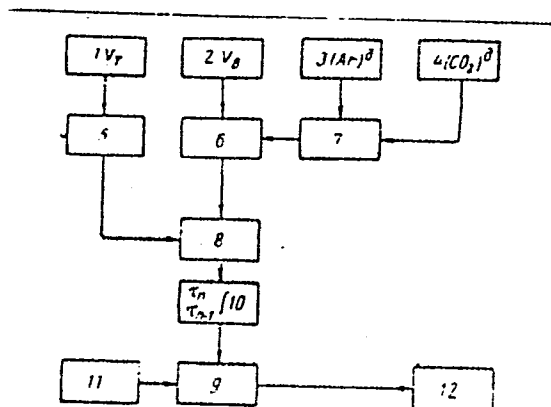
The difference of signals from multiplier (6) and amplifier (5) indicated by adder (8), integrated by (10), is proportional to the mean speed of decarbonisation of the vat. This signal is compared by adder (9) with reference potential and the difference is fed to null-indicator. This can be used as an input to device for automatic control of the process.

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3

7

19761892

AA0043502



21.8.67. as 1182451/18-24, KOROBEKO, M.I. et al.
 (22.5.69) Bul. 31/8.10.68. Class 42 m3 Int. Cl.
 G 06f.

2/3

19761893

pk.

AA0043502

AUTHORS: Korobko, M. I.; Korobko, I. M.; Yegorov, V. K.;
Lukovskiy, Yu. A.; Ivannikov, A. F.;
Seskufov, Lu. V.; Budov, V. M.

19761894

3/3

1/2 010 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--HETEROGENEOUS EQUILIBRIUMS IN A POTASSIUM FLUORIDE, NIOBIUM
PENTOXIDE SYSTEM -U-
AUTHOR--(02)-BUDOVA, G.P., VOSKRESENSKAYA, N.K.
COUNTRY OF INFO--USSR *B*
SOURCE--ZH. NEORG. KHIM. 1970, 15(3), 859-64
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--POTASSIUM COMPOUND, FLUORIDE, NIOBIUM OXIDE, PHASE DIAGRAM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1994/1726 STEP NO--UR/0078/70/015/003/0859/0864
CIRC ACCESSION NO--AP0115555
UNCLASSIFIED

2/2 010

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0115555

ABSTRACT/EXTRACT--(U) GP-C- ABSTRACT. THE BINARY SYSTEM KF-NB SUB2 O
SUB5 WAS STUDIED AS AN UNSTABLE DIAGONAL CROSS SECTION OF THE TERNARY
MUTUAL SYSTEM K, NB MAGNITUDE OF F, O. K SUB2 NB0 SUB3 F (M.
838DEGREES), KNBO SUB3, 2K SUB2 O.3NB SUB2 O SUB5, AND K SUB2 NB0 SUB2 F
SUB3 FORM IN THE SYSTEM. PHASE DIAGRAMS OF THE TERNARY AND THE BINARY
SYSTEMS ARE PARTIALLY CONSTRUCTED.
NEORG. KHIM. IM. KURNAKOVA, USSR. FACILITY: INST. OSHCH.

UNCLASSIFIED

USSR

UDC 547.963.32'854.81

SVERDLOV, YE. D., SPASOKUKOTSKAYA, T. N., and BUDOVSKIY, E. I., Institute of the Chemistry of Natural Compounds imeni M. M. Shemyakin, Academy of Sciences USSR, Moscow

"The Mechanism of the Mutagenic Action of Hydroxylamine. The Syntheses of Cytidine Di- and Triphosphates Modified with Hydroxylamine and O-Methylhydroxylamine"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 5, 1972, pp 700-704

Abstract: The mutagenic effects of hydroxylamine (I) and O-methylhydroxylamine (II) are known to be primarily due to their modification of the cytosine nucleus. Since it is known that the modification of the nucleotides is influenced by the pH, concentration of I or II, and the temperature, in the present study these conditions were appropriately modified to achieve the synthesis of 1- β -D-ribofuranosyl-4,6-dihydroxylamino-5,6-dihydro-2-pyrimidinone-5'-triphosphate (III), 1- β -D-ribofuranosyl-4,6-di(O-methylhydroxylamino)-5,6-dihydro-2-pyrimidinone-5'-triphosphate (IV), the 5'-diphosphate (V) and the 5'-triphosphate (VI) of 1- β -D-ribofuranosyl-4-hydroxylamino-2-pyrimidinone, and the 5'-diphosphate (VII) and the 5'-triphosphate (VIII) of 1- β -D-ribofuranosyl-4-(O-methylhydroxylamino)-2-pyrimidinone. For the synthesis of III 0.5 ml of an aqueous solution of 0.2 M CTP was incubated with 2.5 ml of 8 M I, pH 6.5, for 1/2

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SVERDLOV, YE. D., et al., Khimiya Geterotsiklicheskih Soyedineniy, No 5, 1972, pp 700-704

6 hr. at 20°C, following which I was removed by chromatography on Sephadex G-10, and the nucleotides were separated by ionexchange chromatography on AG 1X8 and DEAE-Sephadex A-25. The yield of III was in the 35-40% range. The nucleotides were determined from their absorbancies in the UV region. IV was produced by incubating 0.2 ml of 1 M CTP with 2.5 ml of 5 M II, pH 6, for 5 hr. at 34°C; the yield was in the 35-40% range. Syntheses of V and VI were attained by the incubation of 0.5 ml of 2 M CDP or CTP, respectively, with 2.5 ml of 1 M I, pH 5, for 6 hr. at 54°C; the yields varied from 25-30%. VII and VIII were formed by the reaction of 0.2 ml of 1 M CDP or CTP, respectively, with 1.5 ml of 1 M II, pH 5, for 7-8 hr. at 54°C, and the yields obtained were 20-25% of the starting cytosine nucleotides. Data were also obtained which indicated that the higher concentrations of I and II led to degradation of the pyrophosphate group to a limited extent. Evaluation of the spectral characteristics of the triphosphates showed that III had an absorption maximum at 225 nm at pH 7, while that of IV was at 230 nm. At pH 7 VI had absorption maxima at 235 and 270 nm, and VIII had maxima at 242 and 272 nm.

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USSR

UDC 547.591.623:547.853.7'854.2/8:547.963.32

SVERDLOV, YE. D., KRAPIVKO, A. P., ~~BUDOVSKIY, E. I.~~, Institute of the Chemistry of Natural Compounds, Academy of Sciences USSR, Moscow

"Tautomeric Equilibrium of 1- β -D-Ribofuranosyl-2-keto-4-(N-methoxyamino)-pyrimidine"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 9, Sep 71, pp 1264-1267

Abstract: The authors studied the tautomeric equilibrium of 1- β -D-ribofuranosyl-2-keto-4-(N-methoxyamino)pyrimidine. Determination of the tautomeric equilibrium constants of the compound was based on the comparison of ionization constants of fixed tautomeric forms, viz. 1- β -D-ribofuranosyl-2-keto-3-methyl-4-(N-methoxyamino)pyrimidine and 1- β -D-ribofuranosyl-2-keto-4-(N-methyl-N-methoxyamino)pyrimidine. The pK_a values of these compounds, determined spectrophotometrically, indicate that tautomeric equilibrium between the oxime and hydroxyamine forms of 1- β -D-ribofuranosyl-2-keto-4-(N-methoxyamino)pyrimidine in aqueous solutions is shifted towards the oxime form ($K_T \approx 25$).
1/1

1/2 012 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--THE CHEMICAL METHOD OF SPECIFIC DEGRADATION OF RNA WITH SELECTIVELY
REMOVED BASES. 3.FISSION OF PHOSPHOESTER BOND IN RIBOSE,2, AND
AUTHOR--(05)-TURCHINSKIY, M.F., GUSKOVA, L.I., KHAZAI, I.K., BUDOVSKIY,
E.I., KOCHETKOV, N.K.
COUNTRY OF INFO--USSR
SOURCE--MOLEKULARNAYA BIOLOGIYA, 1970, VOL 4, NR 3, PP 428-434
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY
TOPIC TAGS--RNA, CHEMICAL DECOMPOSITION, AMINE DERIVATIVE, AMINE CATALYST
CONTROL MARKING--NO RESTRICTIONS.
DOCUMENT CLASS--UNCLASSIFIED
PROXY REFL/FRAME--1998/0187 STEP NO--UR/0463/70/004/003/0428/0434
CIRC ACCESSION NO--AP0120885
UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120885

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AMINE CATALYZED FISSION WAS STUDIED OF THE PHOSPHOESTER BOND IN RHE RIBOSE,2(3), PHOSTATE, THE COMPOUND MODELLING INTERNUCLEOTIDE LINKAGE IN RNA WITH REMVOED BASE. IT WAS SHOWN THAT RIBOSE,3,PHOSPHATE WITH PHOSPHOESTER BOND IN BETA POSITION OT HE GLYCOSIDE CENTER WAS ONLY SPLIT IN THE PRESENCE OF THE PRIMARY AMINES. THE ABILITY OF AMINES INVESTIGATED TO CATALYZE THE CLEAVAGE OF THIS BOND DECREASES IN A SEQUENCE: P,ANISIDINE IS GREATER THAN OR EQUAL TO ANILINE APPROXIMATELY O,AMINOBENZOIC ACID GREATER THAN BENZYLAMINE APPROXIMATELY EQUAL TO LYSINE GREATER THAN ETHYLENEDIAMINE GREATER THAN P,AMINO BENZOIC ACID APPROXIMATELY EQUAL TO SULPHANYLIC ACID GREATER THAN BETA ALANINE APPROXIMATELY EQUAL TO METHYLAMINE. IN THE PRESENCE OF P,ANISIDINE UNDER MILD CONDITIONS (PH 5.30DEGREES, 5 HRS) THE RAPID SPECIFIC FISSION OF THE PHOSPHOSTER BOND OCCURS BOTH IN RIBOSE,3,PHOSPHATE AND IN DEURIDYLIC RNA. PHENYLHYDRAZINE CAUSES RAPID SPLITTING OF RIBOSE,2,PHOSPSHATE BUT NOT OF RIBOSE,3,PHOSPHATE. FACILITY: INSTITUTE OF CHEMISTRY OF NATURAL PRODUCTS, ACADEMY OF SCIENCES, USSR, MOSCOW.

UNCLASSIFIED

Genetics

USSR

UDC 575.24

BUDOVSKIY, E. I., KRIVISKIY, A. S., SVERDLOV, YE. D., and SHERBAN, T. P.,
Institute of Chemistry of Natural Compounds, Academy of Sciences USSR, and
Institute of Molecular Biology, Academy of Sciences USSR

"The Effect of Mutagens on Bacteriophage MS2 and Its Infectious RNA. III.
The Effect of O-Methylhydroxylamine. Analysis of the Kinetics of Inactivation"

Moscow, Genetika, No 1, 1971, pp 120-129

Abstract: Study of the inactivation of bacteriophage MS2 and its infectious RNA under the influence of O-methylhydroxylamine (OMHA) revealed a relationship between the chemical changes in the genome and the inactivating effect of OMHA. Some assumptions on the kinetics of modification of the cytidine residues in bacteriophage MS2 and its infectious RNA appear to have been experimentally confirmed. For example, the rates of individual stages of the reactions that occurred during the action of OMHA on the cytosine nucleus varied with the concentration of the reagent. The higher structures of polynucleotides and nucleoproteins apparently have a substantial effect on the reactivity of the cytosine nucleus. This makes it possible to calculate the contribution of the different kinds of modified residues to the inactivation process. The kinetics of modification of the cytidine residues in the

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BUDOVSKIY, E. I., et al., Genetika, No 1, 1971, pp 120-129

monomers was found to be virtually independent of the ionic strength or presence of Versene. The influence of these factors on the kinetics of bacteriophage inactivation is ascribed to their action on the quaternary structure of the bacteriophage nucleoproteins.

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AA0043502

AUTHORS: Korobko, M. I.; Korobko, I. M.; Yegorov, V. K.;
Lukovskiy, Yu. A.; Ivannikov, A. F.;
Seskučov, Yu. V.; Budov, V. M.

19761894

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1/2 010 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--HETEROGENEOUS EQUILIBRIUMS IN A POTASSIUM FLUORIDE, NIOBIUM
PENTOXIDE SYSTEM -U-
AUTHOR--(C2)-BUDOVA, G.P., VOSKRESENSKAYA, N.K.
COUNTRY OF INFO--USSR *B*
SOURCE--ZH. NEORG. KHIM. 1970, 15(3), 859-64
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--POTASSIUM COMPOUND, FLUORIDE, NIOBIUM OXIDE, PHASE DIAGRAM

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1994/1726 STEP NO--UR/0078/70/015/003/0859/0864
CIRC ACCESSION NO--AP0115555
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--20NOV70

2/2 010

CIRC ACCESSION NO--AP0115555

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE BINARY SYSTEM KF-NB SUB2 O
SUB5 WAS STUDIED AS AN UNSTABLE DIAGONAL CROSS SECTION OF THE TERNARY
MUTUAL SYSTEM K, NB MAGNITUDE OF F, O. K SUB2 NBO SUB3 F IM.
838DEGREES), KNBO SUB3, 2K SUB2 O.3NB SUB2 O SUB5, AND K SUB2 NBO SUB2 F
SUB3 FORM IN THE SYSTEM. PHASE DIAGRAMS OF THE TERNARY AND THE BINARY
SYSTEMS ARE PARTIALLY CONSTRUCTED. FACILITY: INST. OBSHCH.
NEORG. KHIM. IM. KURNAKOVA, USSR.

USSR

UDC 547.963.32'854.81

SVERDLOV, YE. D., SPASOKUKOTSKAYA, T. N., and BUDOVSKIY, E. I., Institute of the Chemistry of Natural Compounds imeni M. M. Shemyakin, Academy of Sciences USSR, Moscow

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Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 5, 1972, pp 700-704

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SVERDLOV, YE. D., et al., Khimiya Geterotsiklicheskikh Soyedineniy, No 5, 1972, pp 700-704

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UDC 547.591.623:547.853.7'854.2/8:547.963.32

SVERDLOV, YE. D., KRAPIVKO, A. P., ~~BUDOVSKIY, E. I.~~, Institute of the Chemistry of Natural Compounds, Academy of Sciences USSR, Moscow

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Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 9, Sep 71, pp 1264-1267

Abstract: The authors studied the tautomeric equilibrium of 1- β -D-ribofuranosyl-2-keto-4-(N-methoxyamino)pyrimidine. Determination of the tautomeric equilibrium constants of the compound was based on the comparison of ionization constants of fixed tautomeric forms, viz. 1- β -D-ribofuranosyl-2-keto-3-methyl-4-(N-methoxyamino)pyrimidine and 1- β -D-ribofuranosyl-2-keto-4-(N-methyl-N-methoxyamino)pyrimidine. The pK_a values of these compounds, determined spectrophotometrically, indicate that tautomeric equilibrium between the oxime and hydroxyamine forms of 1- β -D-ribofuranosyl-2-keto-4-(N-methoxyamino)pyrimidine in aqueous solutions is shifted towards the oxime form ($K_T \approx 25$).
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1/2 012 UNCLASSIFIED PROCESSING DATE--2300170
TITLE--THE CHEMICAL METHOD OF SPECIFIC DEGRADATION OF RNA WITH SELECTIVELY
REMOVED BASES. 3. FISSION OF PHOSPHOESTER BOND IN RIBOSE, 2, AND
AUTHOR--(05)--TURCHINSKIY, M.F., GUSKOVA, L.I., KHAZAI, I.K., BUDOVSKIY,
E.I., KOCHETKOV, N.K.
COUNTRY OF INFO--USSR

SOURCE--MOLEKULYARNAYA BIOLOGIYA, 1970, VOL 4, NR 3, PP 428-434

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY

TOPIC TAGS--RNA, CHEMICAL DECOMPOSITION, AMINE DERIVATIVE, AMINE CATALYST

CONTROL MARKING--NO RESTRICTIONS.

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1998/0187

STEP NO--UR/0463/70/004/003/0428/0434

CIRC ACCESSION NO--AP0120885

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--23OCT70

2/2 012

CIRC ACCESSION NO--AP0120885

ABSTRACT/EXTRACT--(U) GP-0-

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FACILITY: INSTITUTE OF CHEMISTRY OF NATURAL PRODUCTS, ACADEMY OF SCIENCES, USSR, MOSCOW.

UNCLASSIFIED

Genetics

USSR

UDC 575.24

BUDOVSKIY, E. I., KRIVISKIY, A. S., SVERDIOV, YE. D., and SHERBAN, T. P.,
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Institute of Molecular Biology, Academy of Sciences USSR

"The Effect of Mutagens on Bacteriophage MS2 and Its Infectious RNA. III.
The Effect of O-Methylhydroxylamine. Analysis of the Kinetics of Inactivation"

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PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120885

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Genetics

UDC 575.24

USSR

BUDOVSKIY, E. I., KRIVISKIY, A. S., SVERDLOV, YE. D., and SHERBAN, T. P.,
Institute of Chemistry of Natural Compounds, Academy of Sciences USSR, and
Institute of Molecular Biology, Academy of Sciences USSR

"The Effect of Mutagens on Bacteriophage MS2 and Its Infectious RNA. III.
The Effect of O-Methylhydroxylamine. Analysis of the Kinetics of Inactivation"

Moscow, Genetika, No 1, 1971, pp 120-129

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USSR

BUDOVSKIY, E. I., et al., Genetika, No 1, 1971, pp 120-129

monomers was found to be virtually independent of the ionic strength or presence of Versene. The influence of these factors on the kinetics of bacteriophage inactivation is ascribed to their action on the quaternary structure of the bacteriophage nucleoproteins.

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UNCLASSIFIED **B** PROCESSING DATE--03JUL70
TITLE--THE REACTION OF C, METHYLHYDROXYLAMINE WITH DNA IN SOLUTION AND
INSIDE THE PHAGE PARTICLES -U-
AUTHOR--SKLYADNEVA, V.E., KISELEVA, N.P., BUCGVSKIY, E.I., TIKHONENKO,
T.I.
COUNTRY OF INFO--USSR
SOURCE--MOLEKULYARNAYA BIOLOGIYA, 1970, VOL 4, NR 1 PP 116-17
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--HYDROXYLAMINE, DNA, PHAGE, CHEMICAL REACTION MECHANISM,
CYTOSINE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1978/C566 SJEP.NC--UR/C463/70/9C4/001/0116/0117
CIRC ACCESSION AC--4F0C45590
UNCLASSIFIED

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Acc. Nr: **AP0045590**

Ref. Code: UR 0463

PRIMARY SOURCE: Molekulyarnaya Biologiya, 1970, Vol 4, Nr 1,
pp 116-117

THE REACTION OF O-METHYLHYDROXYLAMINE WITH DNA IN SOLUTION AND
INSIDE THE PHAGE PARTICLES

Sklyadneva, V. B.; Kiseleva, N. P.; Budovskiy, E. I.;

Tikhonenko, T. I.
Institute of Virology, Academy of Medical Sciences,
and Institute for Chemistry of Natural Products,
Academy of Sciences, USSR, Moscow

It was shown that the cytosine nuclei in native DNA regions practically did not react with O-methylhydroxylamine (MHA). At the same time the cytosine nuclei of denatured DNA regions did react with MHA, the rate of the last reaction being of the same order as that for cytidine. The correlation was shown between the degrees of the DNA denaturation and modification of the cytosine residues. During the reaction of

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MHA with S₄ phage (1 M MHA, pH 5.0, 32°, 150 hours) only 16—18 per cent of cytosine residues were modified. The data confirm the hypothesis concerning the specific conformation of a part of the intraphage DNA. It was shown that a complicated dependence existed between the degree of phage DNA modification and the stability of virions. Such dependence is supposed to be due to formation of an intermediate products of cytosine nuclei modification which give covalent cross-linkages between head protein and intraphage DNA.

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1/2 011 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--ELECTROPHORESIS OF POLYNUCLEOTIDES IN POLYACRYLAMIDE GEL -U-

AUTHOR--(02)-SIMUKOVA, N.A., BUDOVSKIY, E.I. **B**

COUNTRY OF INFO--USSR

SOURCE--MOLEKULYARNAYA BIOLOGIYA, 1970, VOL 4, NR 2, PP 213-218

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--NUCLEOTIDE, POLYACRYLAMIDE RESIN, GEL, ELECTROPHORESIS,
RNA, CHEMICAL PURITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1984/1715

STEP NO--UR/0463/70/004/002/0213/0218

CIRC ACCESSION NO--AP0100312

2/2 011

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0100312

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. ELECTROPHORESIS IN POLYACRYLAMIDE GEL IS WIDELY USED FOR THE ANALYSIS OF POLYNUCLEOTIDE MIXTURES. THE ROUTINE PROCEDURE INVOLVES REMOVAL OF THE GEL FROM THE TUBES AND STAINING, RESULTING IN DEFORMATION OF THE GEL AND DISTORTION OF THE ZONES. A SIMPLE PROCEDURE IS PROPOSED FOR DETECTION AND INTENSITY EVALUTAIION OF POLYNUCLEOTIDE ZONES IN POLYACRYLAMIDE GEL BASED ON DIRECT SCANNING OF GEL IN FUSED SILICA TUBES AT 270 MU. THIS METHOD IS SHOWN TO BE MORE CONVENIENT, SENSITIVE AND ACCURATE THAN A ROUTINE ONE: IT ONLY TAKES 10 TO 15 MUG OF THE MIXTURE PER TUBE AND 10 TO 12 MIN FOR SCANNING AND PROVIDES A HIGH SENSITIVE MEANS FOR THE ANALYSIS OF THE PURITY OF RNA PREPARATIONS. THE METHOD ENABLES TO STUDY THE EXTENT OF POLYNUCLEOTIDES DEGRADATION UNDER VARIOUS CONDITIONS. AN EQUATION IS PROPOSED FOR THE EVALUTATION OF THE DEGRADATION EXTENT. THE ELECTROPHORETICAL MOBILITY OF POLYNUCLEOTIDES DOES DEPEND ON THEIR SECONDARY STRUCTURE.

UNCLASSIFIED

1/2 016
UNCLASSIFIED
TITLE--MECHANISM OF THE REACTION OF HYDROXYLAMINE WITH THE URACIL RING -U-
AUTHOR--(03)-BUDOVSKIY, E.I., DOMKIN, V.D., KOCHETKOV, N.K.
COUNTRY OF INFO--USSR
SOURCE--DOKL. AKAD. NAUK SSSR 1970, 190(1), 99-101
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ABSORPTION SPECTRUM, HYDROXYLAMINE, URACIL, CHEMICAL REACTION
MECHANISM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3001/0021
STEP NO--UR/0020/70/190/001/0099/0101
CIRC. ACCESSION NO--AT0125861
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--13NOV70

2/2 016
CIRC ACCESSION NO--AT0125861
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE ABSORPTION SPECTRUM OF THE
SYSTEM OF URIDINE 5 PRIME PHOSPHATE IN AQ. HONH SUB2 WAS FOLLWED IN TIME
AND THE 1ST STEP OF THE REACTION IS THE ADDN. OF HONH SUB2 TO C-5-C-6
DOUBLE BOND, AFTER WHICH THE ADDUCT UNDERGOES TRANSFORMATIONS SUGGESTED
BY KOCHETKOV ET AL. (1967).
ZELINSKOGO, MOSCOW, USSR.

FACILITY: INST. ORG. KHIM. IM.

UNCLASSIFIED

Acc. Nr:

MP0045590

Ref. Code: UR 0463

PRIMARY SOURCE: Molekulyarnaya Biologiya, 1970, Vol 4, Nr 1,
pp 116-117

THE REACTION OF O-METHYLHYDROXYLAMINE WITH DNA IN SOLUTION AND
INSIDE THE PHAGE PARTICLES

Sklyadneva, V. B.; Kiseleva, N. P.; Budovskiy, E. I.;
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and Institute for Chemistry of Natural Products,
Academy of Sciences, USSR, Moscow

It was shown that the cytosine nuclei in native DNA regions practically did not react with O-methylhydroxylamine (MHA). At the same time the cytosine nuclei of denatured DNA regions did react with MHA, the rate of the last reaction being of the same order as that for cytidine. The correlation was shown between the degrees of the DNA denaturation and modification of the cytosine residues. During the reaction of

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1/2 011 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--ELECTROPHORESIS OF POLYNUCLEOTIDES IN POLYACRYLAMIDE GEL -U-
AUTHOR--(02)-SIMUKOVA, N.A., BUDOVSKIY, E.I. B
COUNTRY OF INFO--USSR
SOURCE--MOLEKULYARNAYA BIOLOGIYA, 1970, VOL 4, NR 2, PP 213-218
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--NUCLEOTIDE, POLYACRYLAMIDE RESIN, GEL, ELECTROPHORESIS,
RNA, CHEMICAL PURITY

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1984/1715 STEP NO--UR/0463/70/004/002/0213/0218
CIPC ACCESSION NO--AP0100312
UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--13SEP70

CIRC ACCESSION NO--AP0100312

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ELECTROPHORESIS IN POLYACRYLAMIDE GEL IS WIDELY USED FOR THE ANALYSIS OF POLYNUCLEOTIDE MIXTURES. THE ROUTINE PROCEDURE INVOLVES REMOVAL OF THE GEL FROM THE TUBES AND STAINING, RESULTING IN DEFORMATION OF THE GEL AND DISTORTION OF THE ZONES. A SIMPLE PROCEDURE IS PROPOSED FOR DETECTION AND INTENSITY EVALUATION OF POLYNUCLEOTIDE ZONES IN POLYACRYLAMIDE GEL BASED ON DIRECT SCANNING OF GEL IN FUSED SILICA TUBES AT 270 MU. THIS METHOD IS SHOWN TO BE MORE CONVENIENT, SENSITIVE AND ACCURATE THAN A ROUTINE ONE: IT ONLY TAKES 10 TO 15 MUG OF THE MIXTURE PER TUBE AND 10 TO 12 MIN FOR SCANNING AND PROVIDES A HIGH SENSITIVE MEANS FOR THE ANALYSIS OF THE PURITY OF RNA PREPARATIONS. THE METHOD ENABLES TO STUDY THE EXTENT OF POLYNUCLEOTIDES DEGRADATION UNDER VARIOUS CONDITIONS. AN EQUATION IS PROPOSED FOR THE EVALUATION OF THE DEGRADATION EXTENT. THE ELECTROPHORETICAL MOBILITY OF POLYNUCLEOTIDES DOES DEPEND ON THEIR SECONDARY STRUCTURE.

INFORMATION

1/2 015 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--MECHANISM OF THE REACTION OF HYDROXYLAMINE WITH THE URACIL RING -U-
AUTHOR-(03)-BUDEVSKIY, E.I., DOMKIN, V.D., KOCHETKOV, N.K.
COUNTRY OF INFO--USSR *B*
SOURCE--DOKL. AKAD. NAUK SSSR 1970, 190(1), 99-101
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ABSORPTION SPECTRUM, HYDROXYLAMINE, URACIL, CHEMICAL REACTION
MECHANISM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3001/0021 STEP NO--UR/0020/70/190/001/0099/0101
CIRC ACCESSION NO--AT0125861
UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AT0125861

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE ABSORPTION SPECTRUM OF THE SYSTEM OF URIDINE 5 PRIME PHOSPHATE IN AQ. HONH SUB2 WAS FOLLOWED IN TIME AND THE 1ST STEP OF THE REACTION IS THE ADDN. OF HONH SUB2 TO C-5-C-6 DOUBLE BOND, AFTER WHICH THE ADDUCT UNDERGOES TRANSFORMATIONS SUGGESTED BY KOCHETKOV ET AL. (1967). FACILITY: INST. ORG. KHIM. IM. ZELINSKOGO, MOSCOW, USSR.

UNCLASSIFIED

1/2 020 UNCLASSIFIED PROCESSING DATE--3006170
TITLE--ANALGS OF CARBOHYDRATE METABOLISM COENZYMES. 15 SYNTHESIS OF
URIDINE 5 PRIME, -4, DEOXY, D, XYLO, HEXOSYL PYROPHOSPHATE -U-
AUTHOR--(04)--KOCHECHKOV, N.K., BUDDYSKIY, E.I., SHIBAYEV, V.N., KUSOV,
YU.YU.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKADE. NAUK SSSR, SER. KHIM. 1970, (2), 404-11
DATE PUBLISHED--70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--COENZYME, CARBOHYDRATE METABOLISM, CHEMICAL SYNTHESIS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3002/0430 STEP NO--UR/0062/70/000/002/0404/0411
CIRC ACCESSION NO--AP0128001
UNCLASSIFIED